HISTORICAL Site Number: 18CR16:	Other name(s) Fenb oth century lime kiln and quarry Maryland Archeological Res	earch Unit No. 17 ncaster/Frederick Low Maritime site Ownership	SCS soil & sediment code Terrestrial site Nearest Surface Water Name (if any) Copps	Prehistoric Historic Unknown Unknown Unknown Underwater site
-Lat/Long accurate to within 1 sq. mile, user may need to make slight adjustments in mapping to account for sites near state/county lines or streams	Hilltop/bluff Rockshelf cave Interior flat Hillslope Upland flat Unknown Ridgetop Other Terrace Other	State of MD Regional/	Ocean Estuary/tidal river Tidewater/marsh Minimum distance to w	Stream/river Swamp Lake or pond Spring vater is 0 m
Paleoindian site Woodland site Archaic site MD Adena Early archaic Early woodland	ca. 1630 - 1675 ca. 1 ca. 1675 - 1720 ca. 1	N A: 1930 Y A: 1930 A:	frican American Un	ian American Iknown Iknown
Site Function Contextual Data:	Haliana (Daniel Daniel			sst-in-ground
Prehistoric	Domestic			arne-built
Multi-component Misc. ceremonial	Homestead	iisportation		her structure
Village Rock art	Farmstead			
Hamlet Shell midden	Mansion			ve related
Base camp STU/lithic scatter	Plantation			n-domestic agri
Rockshelter/cave Quarry/extraction	Row/townhome			creational
Earthen mound Fish weir	Cellar Fo	rd \square		lden/dump 🔲
Cairn Production area	Privy	□ Bu		ifact scatter
Burial area Unknown	Industrial		emetery Spr	ring or well
Other context	Mining-related Cor	mmercial S	epulchre	_
	Quarry-related Tra	ŭ	solated burial Uni	known
	Mill Sto	ore 🗌 Ble	dg or foundation 🕡 Oth	ner context
	Black/metalsmith	vern/inn P	ossible Structure	
Interpretive Sampling Data: Prehistoric context samples Soil samples taken N Soil samples taken Soil samples taken N Soil samples taken N Soil samples taken Soil samp				

Flotation samples taken Y

Flotation samples taken

Other samples taken

Other samples taken Soil pH taken

	hase II and Pl	nase III Archeological Database and	d Inventory
HISTORICAL Site	Number: 18CR163	Site Name: Getty	Prehistoric
		Other name(s) Fenby Farm Lime Kilns	Historic 🗸
Brie	19th - 20th cer	ntury lime kiln and quarry	Unknown
	cription:		
<u> </u>	,		
Diagnostic Artifact Da	ata:	Prehistoric Sherd Types Shepard	Keyser
Projectile Point Types	Koens-Crispin	Marcey Creek Popes Creek Townsend	Yeocomico
Clovis	Perkiomen	Dames Qtr Coulbourn Minguannan	Monongahela
Hardaway-Dalton	Susquehana	Selden Island Watson Sullivan Cove	Susquehannock
Palmer	Vernon	Accokeek Mockley Shenks Ferry	
Kirk (notch)	Piscataway	Wolfe Neck Clemson Island Moyaone	
Kirk (stem)	Calvert	Vinette Page Potomac Cr	
Le Croy	Selby Bay	Historic Sherd Types Ironstone Staffordshire	Stoneware
Morrow Mntn	Jacks Rf (notch)	Earthenware Jackfield Tin Glazed	English Brown
Guilford	Jacks Rf (pent)	Astbury Mn Mottled Whiteware	Eng Dry-bodie
Brewerton	Madison/Potomac	Borderware North Devon Porcelain	Nottingham
Otter Creek	Levanna	Pearlware	Rhenish
All quantities exact or estir	nated minimal counts	Creamware	Wt Salt-glazed
Other Artifact & Featu	ire Types:	Prehistoric Features Lithic Material Fer qua	urtzite Sil sandstone
Prehistoric Artifacts	Other fired clay	Mound(s) Storage/trash pit Jasper Chalced	dony
Flaked stone	Human remain(s)	Midden Burial(s) Chert Ironstor	ne 🖂 Basalt 🦳
Ground stone	Modified faunal	Shell midden Ossuary Rhyolite Argilite	Unknown
Stone bowls	Unmod faunal	Postholes/molds Unknown Quartz Steatite	Other
Fire-cracked rock	Oyster shell	House pattern(s) Other Quartzite Sandsto	one 🗌
Other lithics (all)	Floral material	Palisade(s) Dated features preser	nt at site
Ceramics (all)	Uncommon Obj.	Hearth(s) Lime kilns dating to the m	
Rimsherds	Other _	Lithic reduc area	· · · ·
Historic Artifacts	Tobacco related 1	Historic Features Privy/outhouse Depression/mound	Unknown
Pottery (all) 265	Activity item(s) 558	Const feature Well/cistern □ Burial(s) □	Other
Glass (all)	Human remain(s)	Foundation	Other kilns,prepared
Architectural 349	Faunal material	Trash pit/dump Railroad bed Cellar hole/cellar	surfaces
Furniture	Misc. kitchen 98	Sheet midden Earthworks	
Arms 7	Floral material	Hearth/chimney	
Clothing 7	Misc. 129	Postholes/molds Road/walkway Wheel pit	
Personal items 2	Other _	Paling ditch/fence All quantities exact or	estimated minimal counts
Radiocarbon Data:			
Sample 1: +/-	years BP Reliability San	nple 2: +/- years BP Reliability Sample 3: +/-	years BP Reliability
Sample 4: +/-	years BP Reliability San	nple 5: +/- years BP Reliability Sample 6: +/-	years BP Reliability
		· · · · · · · · · · · · · · · · · · ·	

Additional radiocarbon results available

MARYLAND Phase II and	d Phase III Ar	cheological Database and In	ventory
HISTORICAL Site Number: 18CR16	Site Name:	Getty	Prehistoric
	Other name(s)	Fenby Farm Lime Kilns	Historic 🗸
21101	19th - 20th century lime kiln and quarry		
TRUST Description:			
External Samples/Data:		Collection curated at MAC	
Additional raw data may be available online			

Summary Description:

The Getty Site (18CR163) is a 19th and 20th century lime kiln and quarry site near Westminster in Carroll County, Maryland. The site is situated on a roughly 2 acre plot surrounded by agricultural fields. A small tributary stream of the Monocacy drainage basin once separated the lime kiln from the quarry. Many mineral resources underlie the site and extractive industries were a historically important part of the local economy. Iron ore deposits were quarried as early as the 18th century. Marble, limestone, and phyllite are processed for crushed stone and cement manufacture. Limestone was also used to produce lime for agricultural purposes. Soils within the site appear to conform to the description of the Glenville Series and Linganore Series which develop in residual from metamorphic rocks such as slate, phyllite, and schists. The site is also sometimes referred to as the "Fenby Farm Lime Kilns".

The principal component of the site is the remains of the three lime kilns built into a hillslope. The three kiln faces are oriented in a general northwest to southeast direction, roughly parallel to a road which passes through the site. The kilns appear to have been built separately but adjacent to each other, giving the stone face a relatively uniform appearance. The stone kiln face acts to stabilize the hill slope. The limestone quarry across the stream has been graded to achieve positive drainage and has not been the subject of much archeological work. Archeological attention was drawn to the site in 1997 when the City of Westminster sought to develop the site as a recreational park. The site is situated within city-owned property. The lime kiln ruins were well-known and according to local lore were thought to have some association with a short-lived iron furnace (the Leigh Furnace) that attempted to reduce metallic iron from limonite ore in the late 18th century. In order to mitigate impacts to the site as a result of the city's planned park development, a Phase I/II investigation was carried out. The investigation began with archival research.

The site is comprised of small portions of several of the early land grants in the Westminster area of Carroll County. These parcels were soon divided via sales to settlers such as Leigh Master, William Durbin, and Washington and Isacc Vanbibber. Of these early settlers, the most incomplete records concern the purchase of land by Leigh Master. Local histories and folklore abound about Master and his personality, but few records exist. The most well-known stories concerning Leigh Master are those associated with his iron furnace. In the 1760s, Master built an iron furnace on one of the plots he owned near Westminster. He quarried limonite deposits of the Avondale ore banks for the furnace. Some researchers have argued that the Leigh Furnace (as it is known) was abandoned around 1767, after only one or two blasts because the ore was considered poor and Master could not produce marketable iron. However, Master built the lavish Avondale estate and it is not thought that he could have supported this plantation off the proceeds of mining limonite alone. Nor does he seem to have had some other source of income. It is conjectured that the furnace was in blast at least until his death in 1796. However, there is no record of it in census data, tax assessment records, or deeds. It was evidently in ruins by the late 19th century and a small portion of the stack was still extant in 1911.

Leigh Master's iron furnace has come to be associated with 18CR163 in the imagination of local residents. Some have even suggested that the kilns served at one time or initially as the Leigh furnace. There is no archival or historical evidence to support this notion. It can be demonstrated that Leigh Master did own three of the tracts composing significant portions of the Westminster Park project area, but none seem to be those on which the furnace was located. In fact, a 1794 map of the area depicts the furnace elsewhere; near Little Pike Creek and closer to Leigh's Avondale estate. Master's tracts of land were divided several times and segments became portions of new tracts over time. Eventually the location of Site 18CR163 was acquired by Joseph Orndorff in 1829, and it is during his ownership of the property that lime kilns are first documented at the site.

Lime is made by burning limestone or marble (both of which contain carbonate of lime) until a chemical change occurs. To attain the sustained high temperatures needed, a furnace stack was usually built of brick and stone and the fire was fueled with wood or coke. During the late 18th and early 19th century, most kilns were used intermittently and, thus, were rather simple in design. Dry-laid stones were piled up along a ridge or bank in a general furnace stack shape. An opening was left near the bottom for stacking wood and limestone, while the top was left open for venting gases and adding additional materials. However, over the course of the 19th century, as lime became increasingly important as a fertilizer and for construction and industrial purposes, such intermittent kilns began to be replaced by structures designed to be fired perpetually or long-term. A perpetual kiln could be loaded, fired, and allowed to burn for extended periods. These kilns could be recharged continually by adding loads of limestone and fuel into the top of the kilns stack. Lime was periodically drawn out from the kiln while it was still burning. Perpetual lime kilns were typically found built into a hillslope near a limestone quarry.

According to ads placed in The Democrat and Carroll County Republican on Jan 1st, 1844 and August 7th, 1845, Joseph Stout had a lime kiln operating on Joseph Orndorff's property. According to the 1845 ad, Mr. Stout was, "selling lime at 9 cents per bushel, which he had burned on Joseph Orndorff's farm". The lime burning evidently continued even after Mr. Stout's tenure at the site. In 1877, William Orndorff advertised that he had limestone and lime for sale. Mr. Orndorff had owned the property that included 18CR163 since 1829 and it is assumed that the ads refer to the Getty site. The full text of the 1877 ad provides insight into the market for Orndorff's lime since is specified that the quality of lime was suitable for builders and agriculture. Orndorff leased the iron ore rights for a quarry on his property to Ashland Iron Company for a ten year period beginning in 1872. Since limestone, iron ore, and metamorphic rock outcrop together along Parrs Ridge, the iron extraction activities may have excavated and discarded limestone in the process of extracting the ore. This would have been a profitable arrangement if the land owner wanted to capitalize on this readily available source of limestone. An 1892 advertisement after the land had passed to the ownership of William F. Fenby offered lime for sale from his newly expanded facilities. This indicates the probable addition of at least one new kiln at this time. The ad also specified the target market and products for his lime: locally available lime suitable for building, whitewash, and agricultural purposes. The suitability of the lime for whitewash indicates that it was obtained from good quality white stone. Lime kiln operations continued until around 1905

Research at Site 18CR163 in 1997 began with survey and visual inspection. Researchers focused primarily on the lime kilns and immediate vicinity. The quarry portion of the site was left largely unexamined. A construction supervisor for a nearby development project indicated that approximately 1.83 meters (6 ft) of fill had been dumped on the floor of the quarry and graded to achieve positive drainage in 1995. Modern fill was also dumped around the base of the kiln face and may have disturbed the kilns somewhat. A large pit that may have been associated with the lime production was encountered during construction of a nearby road. All three kilns were built into a hillslope. These kilns share a common retaining wall or kiln face which was expanded eastward as new kilns were added to this industrial complex.

The subsurface testing began with the excavation of shovel test pits (STPs) placed on 3.048 meter (10 ft), 6.096 (20 ft), and 15.24 meter (50 ft) grid intervals in order to determine the integrity of the site and provide information on artifact distributions and densities that may be useful in identifying activity areas and potential feature locations. A total of 63 STPs were laid out at the site, 56 in the area surrounding the kilns and 7 in the quarry. Of these, 8 STPs were not

MARYLAND Phase	II and Phase III Al	rcneologicai Database and in	ventory
HISTORICAL Site Number:	18CR163 Site Name:	Getty	Prehistoric
	Other name(s)	Fenby Farm Lime Kilns	Historic 🗸
Brief	19th - 20th century lime kiln and c	uarry	Unknown
T R U S T Description:			

excavated because they fell within the quarry side slope, steep hillslope, or a large rock pile. A total of 29 STPs yielded some remains. There were no prehistoric artifacts recovered. There were 128 items recovered from the STP investigation, each falling into 3 functional groups: architectural (12 items), kitchen-related (23 items), and activity items (90 artifacts). Of the activity items, 88 are related to lime production activities, including items such as 16 lime pieces, 2 slag fragments and 70 pieces of coal. These items were found in higher concentrations near the top and base of the kilns. Architectural remains included 2 cut nails, 4 wire nails, and 6 pieces of brick. The kitchen-related assemblage consisted of 8 pieces of modern beer bottle glass, 3 whiteware sherds, and 12 animal bones. The faunal material may not necessarily be associated with historic activities dating to the period that the kilns were in operation.

Soil pH data was collected for most of the STPs located in the lime kiln area. Lime is an alkaline with a pH greater than 7.0. It was anticipated that some specialized activity areas within the site could be identified by a higher soil pH signature. The pH data confirmed the presence of an activity area around the top of the kilns. The highest soil pH (6.8) was found near the top of one kiln and corresponded nicely with the area yielding a higher quantity of lime production activity items (see above). Based on the location of positive STPs, the soil stratigraphy, and soil pH data, it was possible to make several generalizations regarding the site. The STP excavation data: 1) confirmed expectations for lime production activity areas around the top of the kilns, 2) identified the eastern extant of the intact portion of the site, 3) confirmed the presence of fill at the base of the quarry, and 4) documented disturbed areas on the eastern side of the site area. Test pit excavation was warranted to investigate the site further.

A total of seven 1.524 X 1.524 meter (5 X 5 ft) units or comparable area equivilents was excavated in areas directly adjacent to the kiln features. These units were hand excavated in 10.16 cm (4 in) levels within natural layers and terminated when either features became discernable or sterile 'B' soil horizon was encountered. The bottom of each unit was cleaned and exposed features were recorded, mapped, and photographed. Typically, one profile from each unit was recorded. A sample of the features was excavated and a flotation sample was collected from each of these for analysis. The profile of each excavated feature was recorded, mapped, and photographed. Excavated soils were dry-screened through hardware cloth. In addition to the seven excavation units, the interiors of the three kilns were also excavated following similar procedures. Because of the instability of much of the kiln architecture, excavation was only undertaken after shoring up the walls of the structures.

These test excavations resulted in the identification of 17 features at 18CR163 including three kilns and a quarry. This industrial site focused on lime production activities which were centered around the kilns. No evidence of iron-working activities of any sort was encountered.

Feature 2 is the easternmost kiln and appears to be a perpetual (rather than intermittent lime kiln. Details of its construction can be found in the full site report. Based on construction details (massive furnace-like appearance, brick-lined kiln chamber, and the use of narrow gauge railroad ties) indicative of late 19th century kiln technology and an 1892 advertisement (see above) in the local paper of increased capacity, this kiln is given an approximate date of 1892. A total of 246 items were recovered from the excavation of Feature 2. Artifacts recovered which may relate to lime production include lime (17 pieces), charcoal (2 pieces), 8 pieces of coal, slag (4 pieces), a wheelbarrow, a shovel blade, and iron tamping bar, 2 bolts with nuts (wheelbarrow parts), a chisel, a metal bar with holes, and a tin ladle. The wheelbarrow and shovel blade were found on top of lime deposits. The chisel, metal bar with perforations, and tin ladle were recovered from deposits above the wheelbarrow. Other activity-related items (although not necessarily related to the lime industry) encountered include a horseshoe and a piece of light bulb glass. Architectural artifacts include 3 bricks, 11 nails (1 cut), 4 pieces of window glass (2 tinted), a metal staple, and 2 pieces of lime mortar attached to subsoil. Only one possible clothing-related item was uncovered; a piece of fabric. Kitchen-related objects were 110 fragments of kitchen/container glass, 8 ceramic sherds, 11 animal bones, and 6 pieces of crown cap. Miscellaneous objects include 41 fragments of metal, 3 pieces of plastic, a piece of Styrofoam, and a piece of sheet metal with holes.

Feature 3 is the center opening in the retaining wall and is also a perpetual kiln. Part of the hillslope, the top of the kiln, and the retaining wall had eroded down to the base of the kiln. The erosion debris blocked most of the hearth opening for this kiln. Full details of its construction can be found in the full site report, but it is similar in construction to that of the Feature 2 kiln, again dating it to the late 19th century. A white, marble-like rock found near the base of the kiln had a name and date carved into the stone ('Wm FENBY MAY 1889'). It is believed that this rock was once located over the arch opening of this kiln near the top. This cut stone matches a similar size, shape, and type of stone located in the retaining wall of the Feature 2 kiln. A total of 818 items were recovered from the excavation of Feature 3. Twentieth century artifacts were recovered from the upper levels of the feature. Artifacts recovered which may relate to lime production include lime (23 pieces), wood (5 pieces), charcoal (10 fragments), 53 fragments of coal, slag (12 pieces), 3 pieces of limestone, 3 sheet metal plates, 2 cast iron plates, a metal poker, and an unidentified cast iron object. Other activity-related items were 9 fragments of light bulb glass and 4 corroded metal straps. Architectural remains consisted of 30 window glass fragments (1 tinted), 2 nails, and 19 pieces of brick. The only clothing items encountered were two buttons. Kitchen-related artifacts recovered from Feature 3 were 277 kitchen/container glass objects, 3 medicine bottles, 252 ceramic sherds, 7 canning jar lids with glass liners, a spoon handle, and 35 animal bones. One personal object was encountered (a 1905 Belgian coin) along with a single tobacco-related artifact (a Prince Albert can) and a single arms object (a brass rifle cartridge). The miscellaneous artifacts were 62 metal pieces.

Based on local legend, Feature 4 was initially identified as a storage room, however the results of excavation revealed that it was an intermittent lime kiln. The kiln chamber was subrectangular in outline at the top, unlike the other two which were more circular. A bench is also present which is typical of intermittent kilns. The bench would be used to construct an arch of limestone beneath which the fire was built. Additional limestone would then be dropped in via the top of the kiln atop the arch. It was only by knocking the arch down after completion of the kiln firing that the lime could be retrieved. Thus, the presence of the bench is an almost certain indicator of the kiln's intermittent use; the firing had to be stopped in order to retrieve the lime unlike in a perpetual kiln. The intermittent kiln also lacked a brick lining. It did not have the massive furnace-like appearance that the other two had and did not utilize railroad ties in its construction. Therefore, the kiln was built prior to ca. 1865 and predates the other two. Historical research indicates that a lime kiln was present on this property by the 1840s. A total of 55 artifacts were retained from the excavation of this kiln. Coal and miscellaneous metal items comprise the majority of these artifacts. Activity items included 10 pieces of coal, slag (1 piece), 20 metal strap pieces, a metal gas can, a piece of wire, a tractor mower tooth, a horseshoe, and a probable tool part. Many of these items, such as the gasoline can, were obviously modern and not associated with the lime kiln operations. Architectural objects included 4 pieces of plate glass and a wire nail. Kitchen-related artifacts were 5 pieces of bottle glass and a screw-top bottle cap. Three arms-related artifacts (modern brass gun shells) were encountered. And finally, miscellaneous objects were a marble rock with a circular drilled hole, a piece of schist with a rectangular cut hole, 2 corroded metal chips, and an unidentified metal item.

Analysis of the flotation samples taken from these features revealed primarily the presence of charcoal. Although uncarbonized seeds were also encountered, these were representative of the plants found in the modern surrounding landscape and were not deemed useful from an interpretive standpoint. Thus, no ethnobotancial profile has been generated for Site 18CR163. The charcoal samples reveal that in the early intermittent kiln (Feature 4) and in the Feature 3 perpetual kiln, there was a decided preference for hardwoods (ring-porous species) as fuel. However, by the date of the latest lime kiln (Feature 2), the preference for hardwoods is no longer present, suggesting that any wood that was readily available was deemed acceptable.

MARYLAND	Phase II	l and Ph	iase III Ai	rcheological Database and	Inventory
HISTORICAL Sit	e Number:	18CR163	Site Name:	Getty	Prehistoric
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Br		19th - 20th century lime kiln and quarry			Unknown
трист De	scription:				

The area around the base of the kilns had been significantly altered during the time the lime kilns were in operation. The area in front of the hearth arch opening for Feature 2 kiln had evidence of a rut (Feature 11) and a shallow erosion gully (Feature 12) running perpendicular to the kiln face. The two features were filled with dirt and capped by a layer of mortar. Then boards were placed across the mortared surface running perpendicular to these features and parallel to the kiln face. Two different types of lime mortar were deposited over the boards (Feature 10). This indicates that this area received a great deal of activity and required frequent maintenance. Prepared cement-like work surfaces (Features 9 and 16) and a tabular stone surface (Feature 7) were also identified during this investigation. The prepared surfaces were not continuous along the front of the kilns. It is likely that these prepared surfaces were placed in areas with wagon traffic. Wagons were probably pulled up to the kiln entrance and loaded with lime. The specific function of Feature 16, the cement-like slab on the north side of Feature 4 kiln was tentatively identified as a work surface, but may be a road segment. Background research indicated that a shed roof was commonly placed over the entrance to lime kilns to protect workers from the weather. Two possible post holes (Feature 14) were identified during the investigation. Both were shallow and it is unlikely that they could have held a roof support. Feature 1 is a linear pile of rocks located east of the kilns which probably represents a waste pile of material that was left over after the construction of one of the kilns. The presence of two chunks of cinder block indicates that the landowners may have added to this pile of stone rubble in more modern times. Other features noted during excavation were a buried historic A horizon encountered in 2 pits (Features 13 and 15), a charcoal-filled trench (Feature 8), and the remnants of one of the earlier shovel test pits (Feature 6). Th

Artifacts encountered within the 7 test units scattered around the kiln features included 343 activity items, 272 architectural objects, 4 clothing items, 605 kitchen-related artifacts, 1 personal object, 3 arms items, and 16 miscellaneous objects. The 343 activity items were 133 pieces of coal, 108 fragments of lime, 41 pieces of slag, 20 charcoal fragments, a light bulb base, a cast iron object, 2 springs, a sheet metal object, a metal strip, 26 pieces of wire, 5 wire casings, a bolt with nut and washer, a pipe, a wire ring, and a metal wedge. Architectural remains were 14 pieces of lumber, 30 brick fragments, 19 mortar fragments, 54 pieces of window glass, 69 cut nails, 61 wire nails, 15 unidentified nails, and 10 U-shaped nails or staples. Clothing artifacts include a metal rivet and possible 3 pieces of leather. Kitchen-related objects were primarily container glass (576 pieces). However, 2 whiteware sherds, 2 container cap parts, 14 corroded can fragments, and 11 animal bones. Three arms-related objects (lead bullets) and a single personal object (a 1924 Buffalo Nickel) were also encountered. The sixteen miscellaneous items were a piece of melted glass, a piece of Styrofoam, 10 plastic fragments, and 4 pieces of metal.

Although numerous lime kilns are found throughout this region of Maryland, to date no documented lime kilns possess the integrity and unique architectural characteristics found at the Getty site. This site illustrates the change in lime production technology during the 19th century over several phases of its evolution. As such it is a unique resource. There are still intact subsurface archeological features associated with the kilns. The nature, function, and extent of some of these features could not be determined in the limited amount of time for study in 1997. In addition, significant portion of the site which may contain additional features remain unexamined. Thus, 18CR163 possesses additional research potential warranting investigation into the nature of these features.

External Reference Codes (Library ID Numbers):

00005268